

Gallbladder Volvulus: A Case Study

Nour Said^{1*}, Aykael Zribi¹

¹Radiology Department, Tourcoing Hospital

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*Corresponding author: Nour Said
 Radiology Department, Tourcoing Hospital

Abstract

Case Report

Gallbladder volvulus is a rare and serious condition that occurs mainly in elderly patients and is difficult to diagnose preoperatively. We report the case of an 85-year-old patient admitted for acute epigastric pain with abdominal guarding. Laboratory tests revealed an infectious syndrome associated with hyperlipasaemia at 400 IU/L. Abdominal computed tomography revealed a large fluid collection measuring 12 cm on the anterior surface of the right liver, of gallbladder origin, suggestive of gallbladder volvulus. This case illustrates the importance of imaging in the diagnosis of this rare condition and highlights the need for rapid surgical management.

Keywords: Gallbladder volvulus, elderly patient, acute abdominal pain, hepatic collection, complicated cholecystitis.

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INTRODUCTION

Gallbladder volvulus is a twisting of the gallbladder around its cystic pedicle, leading to acute ischaemia that can progress to necrosis, perforation and sepsis. It is an extremely rare condition, accounting for less than 0.1% of cases of acute cholecystitis, and mainly affects elderly people [1,2].

The clinical picture is often misleading and can mimic acute cholecystitis or another abdominal emergency, which explains why preoperative diagnosis is rare [2]. Imaging, particularly computed tomography, plays a central role in identifying this condition [3].

CLINICAL OBSERVATION

This is an 85-year-old patient with no significant surgical history, admitted to the emergency department with sudden onset of acute epigastric pain associated with a deterioration in his general condition.

Clinical examination revealed marked abdominal tenderness with guarding in the epigastrium and right hypochondrium, without clinical jaundice. Haemodynamic parameters were normal.

Laboratory tests showed a clear inflammatory syndrome with elevated infectious markers. Lipase levels were increased to 400 IU/L, which could mistakenly suggest associated acute pancreatitis.

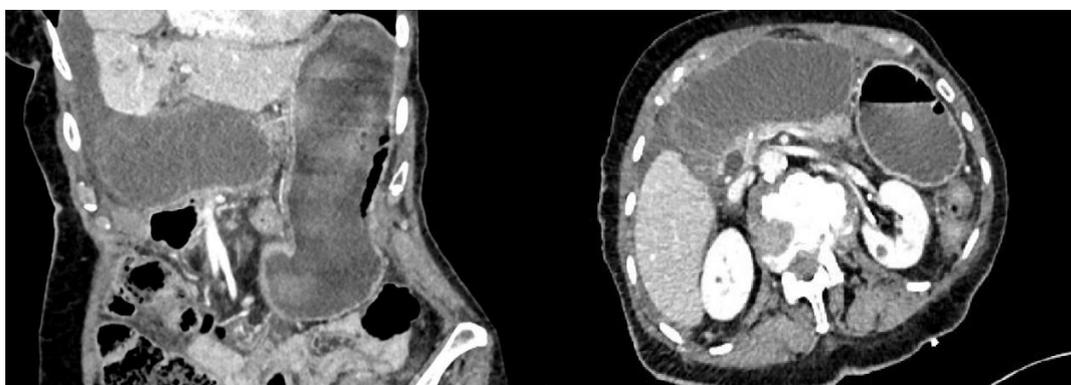


Figure 1: 12 cm collection of fluid on the anterior surface of the right liver, no air bubbles, vesicular origin suggesting gallbladder volvulus

An abdominal CT scan with contrast injection was performed. It revealed a large fluid collection measuring approximately 12 cm in length, located on the anterior surface of the right liver. This collection was continuous with the gallbladder, which was abnormally positioned and distended, suggesting a vesicular origin. All of the radiological findings strongly suggested gallbladder volvulus complicated by a perihepatic collection.

DISCUSSION

Gallbladder volvulus occurs mainly in elderly patients, in association with contributing factors such as hepatic atrophy, loss of gallbladder fixation, kyphoscoliosis or significant weight loss [1,5]. This excessive mobility exposes the gallbladder to torsion of its vascular pedicle.

Clinically, the presentation is often non-specific, combining acute abdominal pain, inflammatory signs and sometimes digestive disorders, making diagnosis difficult and delaying treatment [6]. Elevated lipasemia, as observed in our patient, can be a diagnostic pitfall and lead to a misdiagnosis of acute pancreatitis.

Computed tomography is the key examination. Certain radiological signs, such as the "*whirl sign*" (twisted appearance of the pedicle) or the "*beak sign*", may point to the diagnosis, although they are not always present [3]. Complications such as necrosis, perforation or fluid collections may be observed in advanced cases [4].

Treatment of gallbladder volvulus is surgical and urgent. Cholecystectomy, performed by open or laparoscopic surgery depending on the context and the

patient's condition, is the standard treatment to prevent serious complications [4,7].

CONCLUSION

Gallbladder volvulus is a rare but severe cause of acute abdominal pain in the elderly. Its diagnosis is based primarily on imaging, particularly computed tomography. The presence of a hepatic collection of gallbladder origin should raise suspicion of this condition. Early surgical management is essential to improve the prognosis.

BIBLIOGRAPHY

1. Wuheb A, Ismaiel M, Abdulrahman H, et al. Twist of fate: diagnosing and managing gallbladder volvulus in an elderly patient. *Cureus*. 10 February 2025;17(2):e338532.
2. Keller J, Best S, Boatright C. Gallbladder torsion: a rare but critical diagnosis. *Kansas J Med*. 2024; 17:45-49.
3. Vlasselaer M, Pezzullo M, Liberale G. Gallbladder volvulus: a rare entity with "beak sign" and "whirl sign". *J Belg Soc Radiol*. 2025 Aug;109(1):78.
4. Silva GGD, Elias GN, Raúl AP, et al. Gallbladder volvulus by laparoscopic surgery. *MOJ Surg*. 2024;12(1):16-17.
5. Croce P, Licata S. Gallbladder volvulus: a case report. *J Med Case Rep*. 2021; 15:494.
6. MacDonald A, Smith R, Lee J. Gallbladder volvulus: a diagnostic mimicker of acute cholecystitis. *ACS Case Rev Surg*. 2024;4(5):32-36.
7. Ali MH, Ahmed S, Khan A, et al. Intraoperative diagnosis of gallbladder volvulus. *Case Rep Surg*. 2023;2023: Article ID 10630001.